

OPERATING INSTRUCTIONS
STAMAS V-26 "AMERICANA" CRUISER

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APPENDIX A. Performance Curves.

1. Introduction.

1. 1. The enclosed instructions are addressed primarily to the operation of the modified 25' - 11-1/2" Stamas V-26 hard top cruiser; equipped with dual 160 h. p. Mercruiser 160 engines and outdrive units. It is important to note that this manual does not supercede the operator instructions provided in the manufacturer's manuals supplied with the boat. This manual merely reiterates and supplements those instructions and therefore should be used for quick operator reference only.
1. 2. In addition, Appendix A of this manual also provides the RPM vs speed/range curves for the various operational loading conditions anticipated. The aforementioned curves are based on the results of the boat's performance tests, which were conducted prior to the craft's delivery.

2. General Description of the Stamas.

2. 1. The Stamas V-26 "Americana" is an extremely rugged fiberglass deep "V" hull, which incorporates the addition of foam flotation material in its design. The high density closed cell styrafoam not only serves to add stiffness to the hull, but it also absorbs shock and vibration and makes the hull practically unsinkable in the event of an accidental collision or grounding incident.

- 2.2. In order to provide protection against possible theft, the boat's normally open helm position was completely enclosed with a water-proof pilot house consisting of a fiberglass hard top and an athwartship marine grade plywood bulkhead. In addition, locking devices were also installed on all hatch covers and over the fuel tank fill caps.
- 2.3. For comfort and convenience, the Stamas is equipped with galley and head facilities, along with two (2) 8-foot bunks located in the forward passenger compartment.
- 2.4. A list of the boat's principle dimensions and specifications are provided below:

Hull Material and Design:	Fiberglass/ Deep "V".
Length Overall:	25 ft. , 11-1/2 in.
Beam Overall:	9 ft. , 7 in.
Freeboard:	
Forward:	49 in.
Aft:	26-1/2 in.
Displacement (Approximate):	6,500 lbs.
Draft (Static):	32 in.
Color (Hull and Deck):	White.
Power Package:	Dual 160 h. p. Mercruiser 160 engines with 1.7:1 reduction and 15-1/2 in. x 19 in. propellers.
Electrical System:	12-volt DC with a 55 Amp Alternator charging system.
Fuel Tank Capacity:	250 gal.

3. General Description and Specifications for the Mercruiser 160 Engines and Outdrive Units.

3.1. 160 H. P. Mercruiser 160 Engines.

- a. The dual Mercruiser 160 engines installed in the Stamas are four cycle, six cylinder, overhead valve, in-line engines.

- b. Lubrication is provided by a gear-type oil pump, driven by the distributor shaft, which in turn provides full pressure lubrication. The main oil gallery along hydraulic lifter areas, passes oil through drilled passages to each cam and main bearing, through the hydraulic lifters and hollow push rods to the rocker arms. The rocker arms are individually mounted and pivot on ball seats. All lubricating oil is filtered by a full flow filter system.

3. 2. Stern Drive Units.

- a. The Mercruiser 160 outdrive units are constructed for both general duty and high performance application. Both the drive shaft housing and gear housings are filled with lubricant which provides lubrication for all gears and bearings inside the unit. The propeller is driven by a shear-proof splined shaft, and propeller impact protection is provided by a live-rubber insert inside of the propeller hub. The jet pump vacuum exhaust system is designed to improve engine performance by reducing exhaust back pressure and underwater drag. In order to insure optimum craft performance throughout the range of anticipated payloads, the performance test results clearly indicated that the boat should be driven by 15-1/2" diameter x 19" pitch propellers.

3.3. Specifications for Both the Mercruiser 160 Engines and Outdrive Units.

a. Engine Specifications.

Horsepower:	160 BHP.
Engine Speed at Full Throttle:	3900 - 4300 RPM.
Number of Cylinders:	Six (6); In-line, valve in head.
Bore:	3-7/8 inches.
Stroke:	3-17/32 inches.
Compression Ratio:	8.5:1.
Piston Displacement:	250 cubic inches.
Length (Transom to front of engine):	41-9/16 inches.
Height (Above Crankshaft):	20-7/8 inches.
Depth (Below Crankshaft):	7-1/2 inches.
Engine Suspension:	Three point - rubber mounted.
Carburetion:	One (1) Two-barrel.
Cooling System:	Dual pump system with cold water feed pump plus warm water re-circulating pump.
Valve Lifters:	Hydraulic.
Generator:	12-volt DC, 55 amp Alternator.
Point Gap:	0.016 inches.
Point Dwell:	31° - 34°.
Spark Plugs:	AC - CR44N.
Plug Gap:	0.035 inches.
Timing:	6° BTDC (500-550 RPM).
Idle Speed of Engine:	500 - 600 RPM.
Fuel Required:	Regular automotive.
Electrical System:	12-volt DC negative ground.
Firing Order:	1 - 5 - 3 - 6 - 2 - 4.
Number of Main Bearings:	Seven (7).
Weight (Dry):	485 pounds/engine.

b. Outdrive Specifications.

Gear Ratio:	1.7:1.
Propeller Drive:	Shear-proof Spline (no shear or drive pin).
Propeller Impact Protection:	"Flo-Torq" Propeller Safety Clutch.
Propeller Size:	15-1/2" diameter x 19" pitch.
Dry Weight:	165 pounds/outdrive.

4. Operating Instructions.

4.1. Fuel Requirements.

- a. Any good grade automotive regular gasoline, with a relatively high octane rating, should be used in the Mercruiser 160 engines. Low octane gasolines tend to cause detonation which can result in serious damage to the engine pistons and bearings, or both.

4.2. Pre-Start Check-Off List.

- a. Thoroughly ventilate the engine compartment by opening the engine hatch cover. Also operate the bilge blower in the engine compartment for at least five (5) minutes in order to remove any entrapped gasoline fumes from the compartment. Do not attempt to start the engine until the above has been accomplished. Failure to comply with the above may result in a serious explosion and fire.
- b. Check the engine oil level.
- c. Check the amount of fuel in the fuel tanks.

- d. Align the fuel line valves to supply fuel to the engines from the desired tank.
- e. Visually inspect all fuel line connections for leaks.
- f. Insure that all of the engine's drain plugs are properly installed.

4.3. Starting Procedure.

- a. Upon completion of the Pre-Start Check, the engine may be started in accordance with the following instructions.

NOTE: Since the Stamas is equipped with dual engines, the starting procedure delineated below must be performed for each engine separately.

- (1) Place either the port or starboard engine's remote control handle in the "NEUTRAL" position.
- (2) If the engine is cold, push in on the button located in the center of the control handle hub, and, while holding the button in, move the control handle forward. Release the button (button should remain in). This disengages the shift mechanism from the throttle and allows the throttle setting to be increased for starting.
- (3) Turn the ignition key clockwise to the "START" position. As soon as the engine starts, release the key and allow it to return to "RUN" position.

IMPORTANT: Check engine RPM on the tachometer as soon as engine starts. DO NOT ALLOW RPM TO EXCEED 1500. Move control lever back to decrease RPM.

To facilitate starting when engine is cold, move throttle lever back and forth three (3) or four (4) times while starter is operating. This will actuate the carburetor accelerator pump and feed more fuel to the engine for starting. DO NOT move throttle lever back and forth if engine is hot, as this will cause flooding to occur.

IMPORTANT: In addition, DO NOT continue to operate the starter for more than 30 seconds without pausing to allow starter motor to cool off for two (2) minutes. This will also allow the battery to recover between starting attempts.

- (4) Check the oil pressure gauge. The gauge should show approximately 35 PSI at 1500 RPM.
- (5) If the engine is cold, run for a short period of time at a fast idle speed that DOES NOT exceed 1500 RPM.
- (6) Move the control handle back to the "NEUTRAL" position. This automatically engages the shift mechanism.
- (7) Move the control handle to "FORWARD" gear or backward to REVERSE gear. Approximately the first 45° of control handle travel either forward or reverse of the "NEUTRAL" position shifts the outdrive unit. The remainder of the control handle movement advances the engine's throttle.

4.4. Stopping Procedure.

- a. Move the remote handle to the "NEUTRAL" position and allow the engine's RPM to drop to idle speed. Turn ignition key counter-clockwise to the "OFF" position.

CAUTION: Do not race the engine before turning the ignition key off with the engine running above idle speed. This could cause water to be drawn into the engine via its exhaust system and result in internal damage.

4.5. Initial Adjustments.

- a. Tilt Angle (Outdrive Pin Position) Adjustment.

- (1) The performance curves shown in Appendix A indicate that over the range of operational payloads anticipated the number one (1) outdrive position (i. e., the one closest to the transom) is best suited for properly trimming the craft when underway. As a result, both outdrive units have been preset in this position.
- (2) However, due to variations in positioning of payloads on board and to assure proper control of the boat, the outdrive's tilt angle stud may be repositioned in the gimbal ring tilt stud holes.
- (3) After determining the tilt stud hole that places the boat on plane or even keel, raise the outdrive unit in accordance with the instructions provided in paragraph 4. 6. below and reposition the stud in the desired hole.

NOTE: Five (5) such holes are available for trim angle adjustment.

It should also be noted that by tilting the outdrive unit out one or more stud holes, will tend to raise the bow of the boat. Whereas, tilting the unit in will tend to lower the bow and compensate for relatively large payloads being carried aft.

CAUTION: Do not operate the boat with the tilt stud removed from the gimbal ring.

b. Trim Tab Adjustments.

- (1) The adjustable trim tab balances the "Steering Torque" so that the steering wheel will turn with equal ease in each direction at full throttle. If the boat turns more easily to the right than to the left, remove the plug on top of the drive shaft housing, loosen the socket head screw and move trim tab trailing edge to the right. Tighten the cap screw and replace the previously removed plug. If the boat turns more easily to the left than to the right, move the trailing edge of the trim tab to the left.
- (2) The trim tab also serves as a galvanic corrosion inhibitor, protecting the aluminum drive shaft and gear housing from electrolytic action on units operated in salt water. Another galvanic corrosion inhibitor may also be found at the base of the outdrive's gimbal housing.

- (3) Due to the protection offered by these corrosion inhibitors, it is recommended that the outdrive unit be left in the down position when the boat is moored. If the trim tab is out of the water, when the outdrive is tilted up, it cannot function as a galvanic corrosion inhibitor.
- (4) Likewise, DO NOT PAINT or place protective coating on these trim tabs, as their protective value will be lost. In conjunction with paint applications, NEVER USE ANTI-FOULING PAINTS, which contain COPPER AND MERCURY compounds on the outdrive units since their application will result in corrosion of aluminum drive and gear housings due to the galvanic corrosion process.

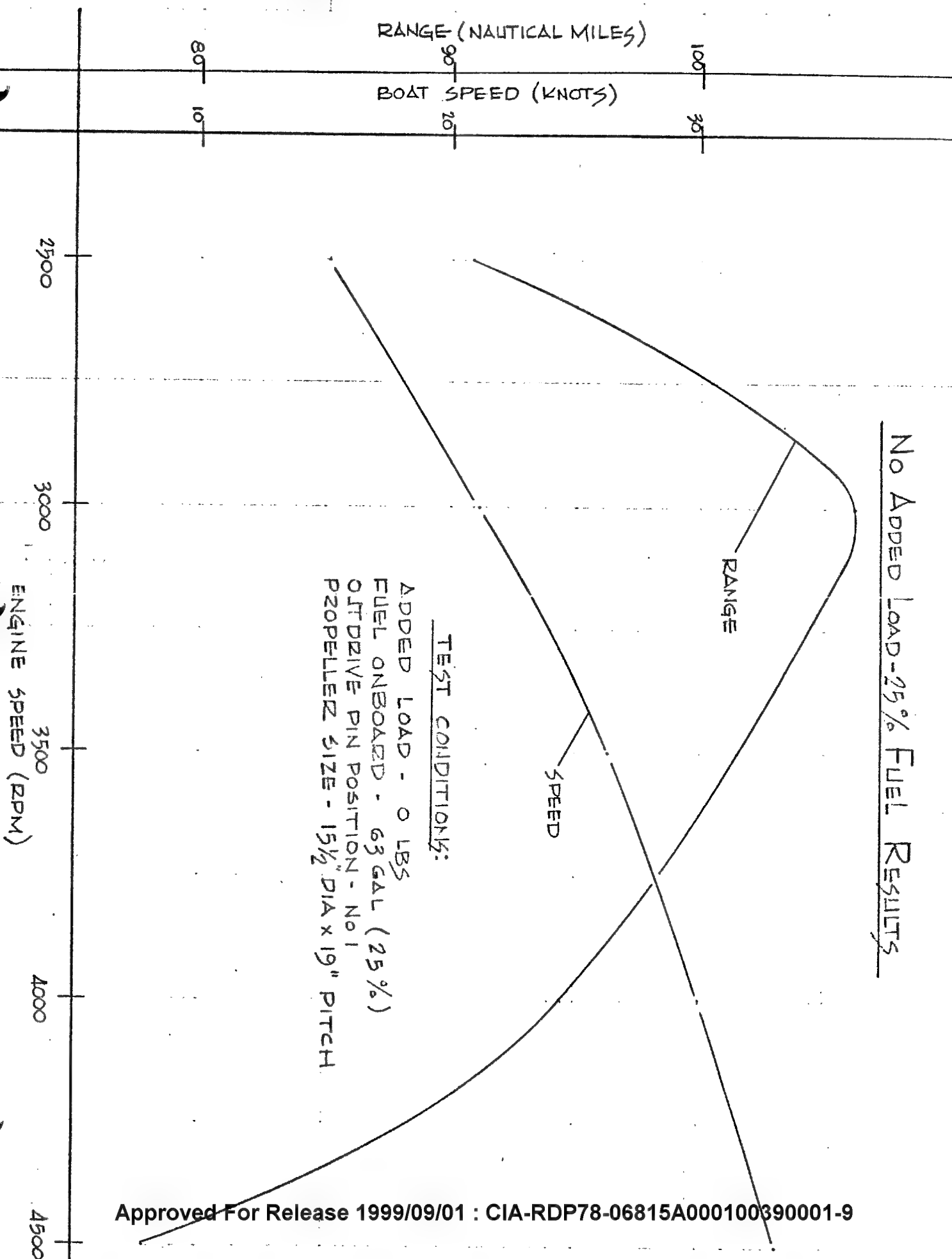
4. 6. Outdrive Manual Tilt-Up Procedure.

- a. Mercruiser outdrives are spring-locked in the forward gear position and will tilt up only after striking a submerged object abruptly, or when the "TILT UP RELEASE" lever, located on the left side of the drive unit is unlocked.
- b. To unlock the outdrive unit for tilt-up, turn the reverse hook release lever to the unlock (down) position. Place the hook end of the lift hook around the outdrive's shock cylinder mounting bosses at the rear of the drive shaft housing. Pull on the lift hook cross bar to raise the outdrive out of the water. Place the opposite end of the hook in the recess provided on top of

the gimbal housing. Twist the turnbuckle clockwise to draw the lift hook together to secure the outdrive in position. To tilt the outdrive unit down, merely reverse the above procedure.

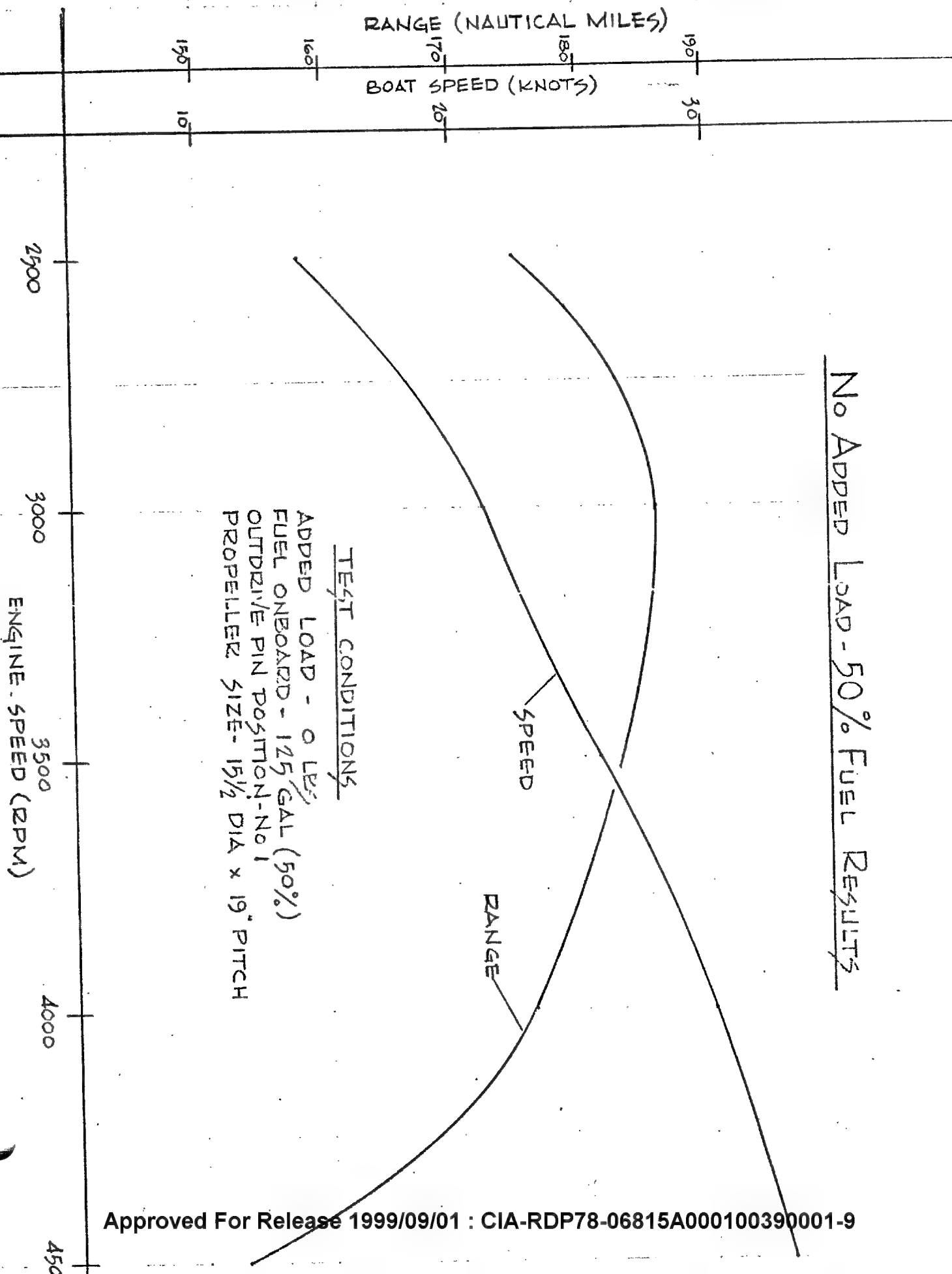
4. 7. Caution for Shallow Water Operation.

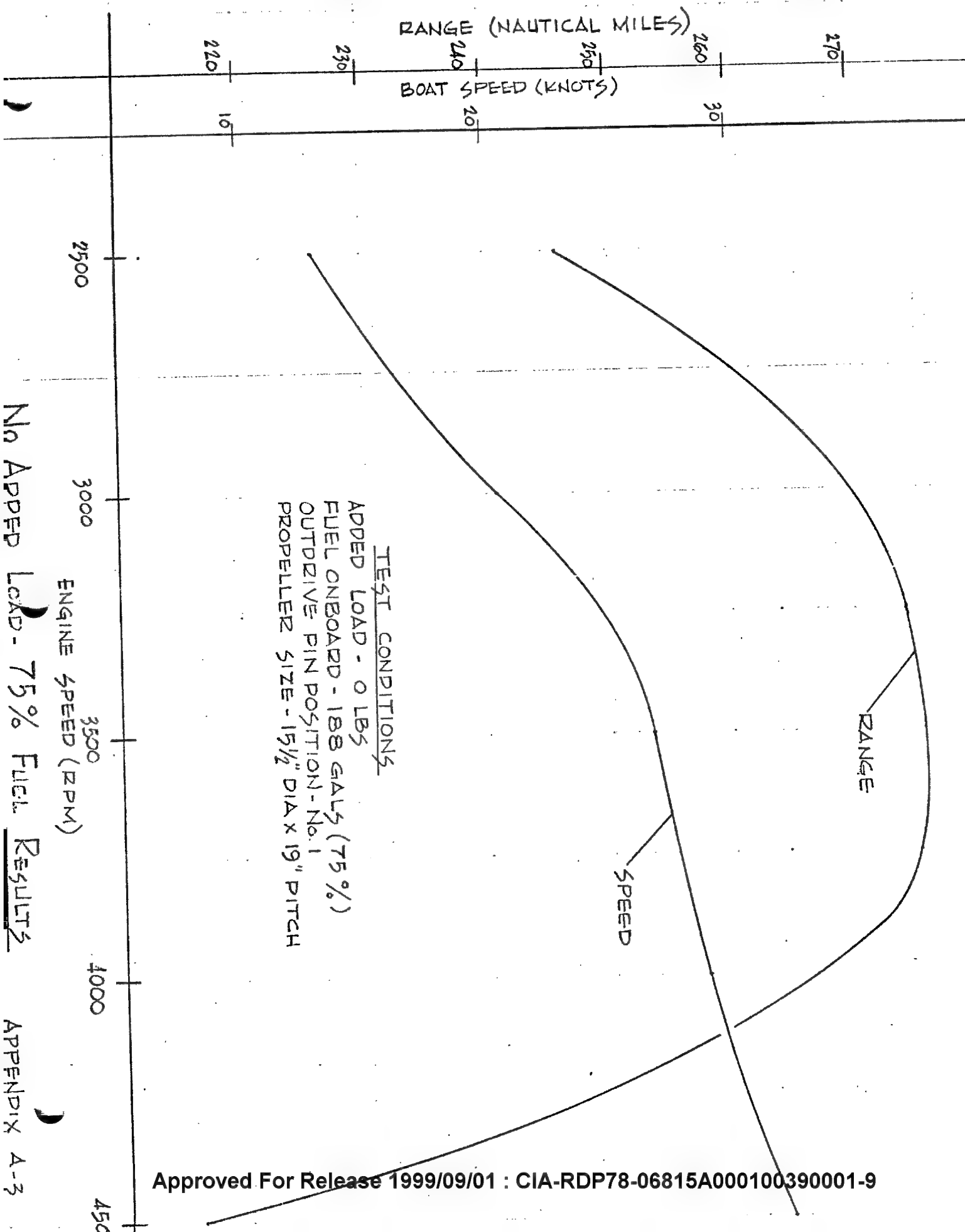
- a. Exercise caution when operating the engine at extreme tilt angles in shallow water. Should the water level fall below the outdrive's water intake ports, overheating or water pump impeller damage could result.
- b. When the shift lever is in the "Reverse" position, the outdrive's lower unit is locked in its normal operating position and cannot tilt up when striking either the bottom or a submerged object. Shock load of impact could cause serious damage when the boat is backing up. Therefore, proceed cautiously when in reverse motion and be careful of underwater obstructions. Do not accelerate the engines to a high RPM.



No Added Load - 25% Fuel Results

No Added Load - 50% Fuel Results





No Apped Load - 75% Fuel Results
APPENDIX A-3

RANGE (NAUTICAL MILES)

BOAT SPEED (KNOTS)

No Added Load - 100% Fuel Results

TEST CONDITIONS
 ADDED LOAD - 0 LBS
 FUEL ONBOARD - 250 GALS (100%)
 OUTDRIVE PIN POSITION - N.O. 1
 PROPELLER SIZE - 15 1/2" DIA x 19" PITCH

SPEED

RANGE

2500

3000

ENGINE SPEED (RPM)

3500

4000

4500

260

5

280

10

300

15

320

20

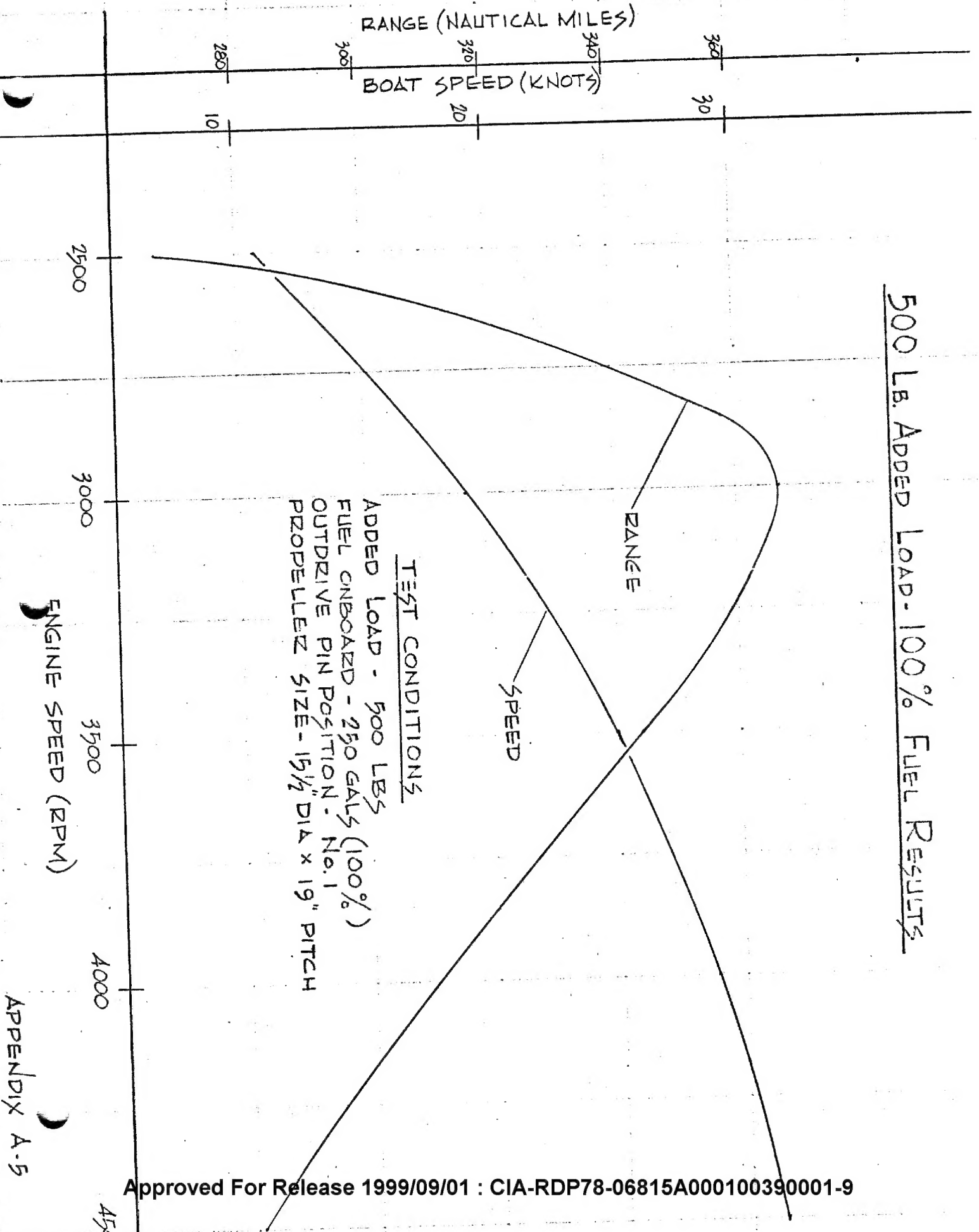
340

25

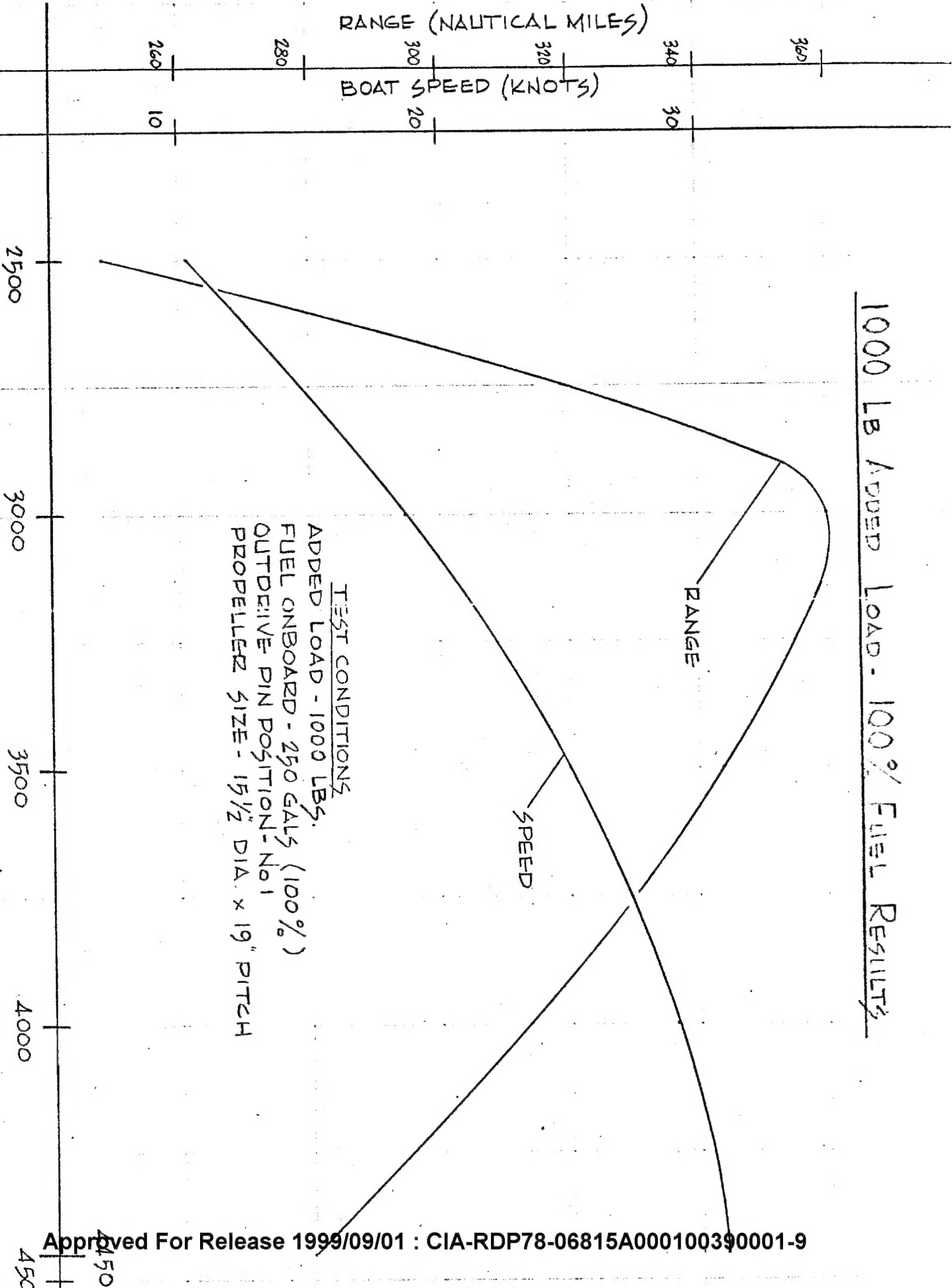
360

30

500 LB. Added Load - 100% Fuel Results



1000 LB ADDED LOAD - 100% FUEL RESULTS



1500 LB ADDED LOAD - 100% FUEL RESULTS

